

CLAIMS

What is claimed is:

1. An swinging objective retarding immersion lens system for focusing a primary particle beam and moving the focused particle beam on a specimen to be examined and collecting the secondary electrons and back-scattered electrons generated by the primary beam colliding with the specimen, the system comprising:

a magnetic lens for generating a magnetic field in the vicinity of the specimen to focus the particles of the particle beam on the specimen, the magnetic lens having a central bore through which the particle beam travels;

an electrode having a potential for providing a retarding field to the particle beam near and at the specimen to reduce the energy of the particle beam when the beam collides with the specimen; and

a deflection system including a plurality of deflection units situated along the beam axis for deflecting the particle beam to allow scanning of the specimen, at least one of the deflection units located in the retarding field of the beam, the remainder of the deflection units located within the central bore of the magnetic lens.